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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/658,498 | 09/09/2003 | J. David Campbell | J-2583C | 1796 |

25884 7590 01/10/2005

JOHNSON POLYMER, INC.
8310 16TH STREET- M/S 510
P.O. BOX 902
STURTEVANT, WI 53177-0902

EXAMINER

RABAGO, ROBERTO

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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1713

DATE MAILED: 01/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/658,498

Applicant(s)

CAMPBELL ET AL.

Examiner

Roberto Rábago

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 36-51 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 36-51 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/1/2003
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 36 and 42 are rejected under 35 U.S.C. 102(b) as being anticipated by DE 3026831.

The reference shows in Examples 1 and 8 the continuous production of polymer comprising styrene and divinylidioxane at 280°C in a stirred reactor, wherein the polymer is stated to be practically free of gel (page 2, line 16). Although the reference does not disclose the degree to which the reactor is "substantially filled", this limitation would be inherent because the skilled chemist would immediately envisage that the reactor would

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be efficiently operated in a substantially filled state. Accordingly, the reference contains all claimed limitations.

4. Claims 36, 42-44 and 47-49 are rejected under 35 U.S.C. 102(b) as being anticipated by Gustafson et al. (US 5,539,075).

The reference shows in Example 10 the radical polymerization of ethylene and 1,9-decadiene in a continuous agitated reactor at 270°C in the presence of propylene acting as a chain transfer agent. The reference does not disclose the degree to which the reactor is "substantially filled"; however, this limitation would be inherent because the skilled chemist would immediately envisage that the reactor would be efficiently operated in a substantially filled state. The reference does not disclose the residence time; however, the ordinary skilled chemist would immediately envisage the claimed range because applicants have claimed virtually the entire range of conventional values. The reference further makes no mention of the substantial presence of gels, and therefore it can be reasonably concluded that gels are absent or substantially absent in the reference method. The burden of proof is shifted to applicants to show that the polymer of the reference method is not substantially free of gel.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 37, 38, 41, 45 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE 3026831.

The parent claim is discussed with respect to this reference above. The limitations missing from the cited working examples are disclosed as follows: monomer percentage (pg. 2, lines 27-29), divinylbenzene (pg. 4, line13) and solvent (pg. 5, lines 14-19). One of ordinary skill in the art would be motivated to use these components in the disclosed method because they have been suggested as useful embodiments.

7. Claims 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gustafson et al. (US 5,539,075).

The parent claim is discussed with respect to this reference above. The claimed range of divinyl monomer is suggested at col. 4, lines 52-56, providing motivation for the those of ordinary skill in the art to use such values.

Double Patenting

8. Claims 36-44 and 48-51 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-10 of U.S. Patent No. 5,986,020. Although the conflicting claims are not identical, they are not patentably distinct from each other because essentially the same method is being claimed. The additional limitation in the instant ^{claims} regarding the resultant polymer being

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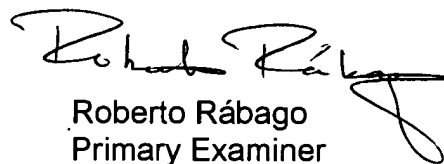
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"substantially free of gel" would be inherent in the claimed method because essentially the same method is being claimed.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberto Rábago whose telephone number is (571) 272-1109. The examiner can normally be reached on Monday - Friday from 8:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Roberto Rábago
Primary Examiner
Art Unit 1713

RR
January 7, 2005